CLAIMS:

1. A method of providing data for transmission on a time division multiplexed (TDM) serial data stream, the method comprising:

mapping channels of the TDM stream to contexts, each context comprising a set of memory buffers for storing data to be transmitted;

extracting data from the contexts in a sequence defined by said mapping and transmitting the extracted data on the TDM stream;

when a buffer or buffers of a context become empty, generating a buffer refill request to cause data to be read from a memory to refill the buffer, wherein each buffer refill request is assigned a priority; and

handling buffer refill requests according to their relative priorities to refill the context buffers.

2. A method according to claim 1, wherein the priority assigned to a buffer refill request depends upon the number of buffers of the corresponding context which are empty.

3. A method according to claim 1, wherein the priority assigned to a buffer refill request depends upon the priorities of outstanding buffer refill requests for other buffers of the same context.

4. A method according to claim 3, wherein priorities are allocated to the fill requests on a first come first served basis, with a request being allocated the lowest unallocated priority, and once a refill request has been satisfied, the priority of that request is available for allocation to a subsequent request.

5. A method according to claim 1, wherein the buffer refill requests are generated by a data cache which provides said contexts, and are passed to a memory interface which is responsible for reading data from said memory to refill the buffers.

6. A method according to claim 5, wherein the memory interface places the refill requests in a handling queue according to their relative priorities.

7. A serial data transmitter for transmitting data on a time division multiplexed (TDM) serial data stream, the transmitter comprising:

a data cache arranged in use to provide a set of contexts, each context comprising a set of memory buffers for storing data to be transmitted

means for storing a mapping of TDM channels to contexts;

first processing means for extracting data from the contexts in a sequence defined by said mapping and for transmitting the extracted data on the TDM stream;

second processing means for generating a buffer refill request to cause data to be read from a memory to refill a buffer when a buffer or buffers of a context become empty, and for assigning each buffer refill request a priority; and

third processing means for handling the buffer refill requests and for refilling the context buffers.

8. A transmitter according to claim 7, wherein the data cache, means for storing a mapping of TDM channels to contexts, first processing means, second processing means, and third processing means, are integrated into a single device.

9. A switch for coupling a time division multiplexed (TDM) network to a packet switched network, the switch comprising a serial data transmitter for transmitting data on a TDM serial data stream, the transmitter comprising:

a data cache arranged in use to provide a set of contexts, each context comprising a set of memory buffers for storing data to be transmitted

means for storing a mapping of TDM channels to contexts;

first processing means for extracting data from the contexts in a sequence defined by said mapping and for transmitting the extracted data on the TDM stream;

second processing means for generating a buffer refill request to cause data to be read from a memory to refill a buffer when a buffer or buffers of a context become empty, and for assigning each buffer refill request a priority; and

third processing means for handling the buffer refill requests and for refilling the context buffers, wherein the data cache, means for storing a mapping of TDM channels to contexts, first processing means, second processing means, and third processing means, are integrated into a single device.